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No.

Supreme Court, U. S.
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In The
Supreme Court of the United States

October Term, 1980

NEAL FACTOR & NAT ZIMMERMAN
Petitioners,

v.

COMMISSIONER OF PATENTS AND TRADEMARKS
Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE COURT OF CUSTOMS AND PATENT APPEALS

EDWARD A. RUESTOW
Attorney for Petitioners
36 Valley Road
Old Westbury, New York 11568
(516)626-3565

THE QUESTIONS PRESENTED

1. Has the Patent and Trademark Office (in effect) restricted the ability to obtain protection under the United States Patent laws by its disregard of prior Court holdings which narrowly interpret the term "prior art", as used in 35 U.S.C. Section 103, by declaring that the broad category of "optical display devices" is a "prior art" within the meaning of that statute?

2. Does the holding, by the Patent and Trademark Office, that the subject device is "obvious", ignore the judicially created (standard) that improvements which substantially advance the "prior art" are not obvious if a higher than ordinary level

of skill was necessary for their development?

3. Is the decision of the Court of Customs and Patent Appeals erroneous as it is totally unsupported by the facts?

TABLE OF CONTENTS

The Questions Presented 1

Opinions Below..... 7

Jurisdiction..... 7

Constitutional Provisions, Statutes and Rules..... 9

Statement of the Case 10

Reasons for Granting the Writ 17

Argument:

I - The Patent and Trademark Office (in effect) has restricted the ability to obtain protection under the United States patent laws by its disregard of prior court holdings which narrowly interpret the term "prior art", as used in 35 U.S.C. 103, by declaring that the broad catagory of "optical display devices" is a "prior art" within the meaning of that statute 19

II - The holding, by the Patent and Trademark Office, that the subject device is "obvious", ignores the judicially created (standard) that improvements which substantially advance the "prior art" are not obvious if a higher than ordinary level of skill was necessary for their development 33

III - The decision of the Court of Customs and Patent Appeals is erroneous as it is totally unsupported by the facts 41

Conclusion 52

Appendix A - Opinion and Decision of the Board of Appeals.. 1a

Appendix B - Opinion and Decision of the CCPA 7a

Appendix C - Definitions of the "art"..... 10a

Appendix D - Constitutional and Statutory Provisions 21a

TABLE OF AUTHORITIES

A. Kimball Co. v.
Noesting Pin Ticket Co.
262 Fed. 148 (CA 2 1919) 50

Application of Antle
444 F.2d 1168 (1971) 24,29

Baker Manufacturing v.
Whitewater Manufacturing
298 F. Supp. 1389 (1969) 25

The Barb Wire Patent
143 U.S. 281 (1891) 22,37

Dewey and Almy Chemical Co. v.
Mimex Co.,Inc.
52 USPQ 138 (1942) 36,37,44

Eibel Co. v. Paper Co.
261 U.S. 45 (1922) 17,34,37,44

Graham v. John Deere Co.
383 U.S. 1 (1966) 17,19,20,22,
23,25,30,54

Hotchkiss v. Greenwood
11 U.S. (1850) 22,30

In re Adams
364 F.2d 473 (1966) 25

In re Warner
379 F.2d 1011 (1967) 25

Krementz v. The S. Cottle Co.
148 U.S. 556 (1892) 17,22

Potts v. Creager
155 U.S. 597 (1894) .. 17,24,29,37,38

Smith v. Snow
294 U.S. 5 (1934) 22,44

U.S. v. Adams
383 U.S. 1 (1966) 17,22

United States Constitution
Article I, Section 8, Clause 8 9,52

United States Code:

Title 28, Section 1256 8

Title 35, Section 103 . 1,9,10,16,17,19,
20,21,23,24,27

Title 35, Section 141 9

Other Authorities:

Rule 17(1)(c)(2) of the U.S.
Supreme Court 8

Funk and Wagnell's International
Dictionary 13,14

OPINIONS BELOW

The petitioner respectfully prays that a Writ of Certiorari issue to review the judgement of the Court of Customs and Patent Appeals entered in the above case on October 2, 1980.

JURISDICTION

The Board of Appeals' judgment and opinion was entered on November 20, 1979. Copy of said opinion is set forth in Appendix A. The Court of Customs and Patent Appeals' judgment and opinion was entered on October 2, 1980. Copy of said opinion is set forth in Appendix B. The Court of Customs and Patent Appeals granted stay to petition for Certiorari on November 21, 1980 to lapse on December 20, 1980. An extention of stay was petitioned on December 18, 1980, and, if

granted, will lapse on December 31, 1980.

The jurisdiction of this Court is invoked under 28 U.S.C. Section 1256 and pursuant to Rule 17(1)(c) and (2) of Rules of the Supreme Court.

CONSTITUTIONAL PROVISIONS, STATUTES AND RULES

The Constitutional provisions involved are Article 1, Section 8, Clause 8 of the United States Constitution. The statute setting forth the requirement for patentability is 35 U.S.C. Section 103. Jurisdiction in the Court of Customs and Patent Appeals was founded on 35 U.S.C. Section 141.

STATEMENT OF THE CASE

The Patent and Trademark Office and the Court of Customs and Patent Appeals have found that petitioners' device is novel and utilitarian, but have denied patent protection to petitioners on the grounds that it is "obvious" under 35 U.S.C. Section 103. This position is based upon three earlier patents which the Patent and Trademark Office claim to be in the same art as petitioners' device. This "art" they define as the art of optical display devices. It is their contention that when the teachings of all three patents are taken together (the prior art) the petitioners' improvements become prima facie obvious. The first of the prior art patents cited is #1,259,147 granted to McCormick on February 12, 1918. This patent reveals

a system which causes motion picture film to automatically turn light bulbs on and off behind a translucent screen on which the film is being projected. These lights are positioned so that they can be turned on to provide light behind the screen when an object which would normally radiate light is being projected on the front of the screen. This device is limited to use in scenes where the viewer sees the sun, the moon, a street light, or another source of illumination being projected on the front of the screen. McCormick does make provisions for the slow motorized movement of the bulbs, provided that the movement is not required to be in sychronization with the film.

The second patent #3,181,170 was awarded to Akin on April 27, 1965. It is a device in which the information to

be displayed is scribed on a plate by means of a concentrated beam of energy. This device is intended for use with data processing and computing equipment. The information is displayed to the viewer by using ordinary incandescent light and the concentrated beam of energy is never seen by the viewer.

The third patent #3,757,106 was awarded to Bau on September 4, 1973, with a foreign application priority date of April 9, 1970 (originally a German patent). It is a lighting effects device consisting of a laser beam which bounces off or through a rotating filtering disk. The laser beam is not scanned or moved, it is only diffused, defracted, refracted, or reflected by the materials in its path. the device is essentially a motorized laser kaleidoscope, intended for advertising and

theater displays. No mention is ever made of possible use with motion pictures.

Petitioners' device is a system for producing special effects in the movie theater in sychronization with the motion picture. The system includes a laser whose beam is projected on the front of a conventional movie screen or occasionally through an opening in or alongside the movie screen, to allow projection out at the audience. At no time is any projection onto the rear of the screen involved. The beam can be moved anywhere else on or off the front of the screen with great rapidity. It is moved at rates so high that the human eye connects the various points at which the beam is present into continuous lines (scanning) (definition #6 of "scan"; Funk and Wagnell's New Compre-

hensive International Dictionary, copyright 1978). Some of the means which could be used to scan the laser beam are similiar in many respects to Akin's scanning means (but Akin's device and petitioners' device contain more dissimiliar than similiar components). These scanning means were not invented by Akin and his invention was patented despite their inclusion in his device.

The scanning means are controlled by a memory system which contains stored information as to the beam's movement, placement, color, etc. The memory system advances synchronously with the film being projected on the screen. This synchronization feature allows the system to place laser light patterns in the correct position in each frame of the film as the picture is changing at is regular 24 frames per second rate. The

laser light patterns become integral parts of the projected film, e.g. if a picture of the planet Saturn is to be depicted as receding on the screer, the image of the planet is on the film itself, while the rings of Saturn are projected by the laser, and as the planet is depicted as receding on the screen, so are the rings.

The laser patterns are by no means limited to merely replacing sources of illumination on the screen, instead they are actual elements of the motion picture scene. The advantages of the system lie in its ability to create images of a brilliance, intensity, and appearance which would be otherwise unobtainable via conventional motion picture projection. This results from the use of the laser in the theater. The success of the effects hinges completely on the fact

that the viewer sees actual laser light and not photographs of laser light, as petitioners discovered from their own experiments. It should also be noted that the system provides three dimensional effects when beams of laser light are projected at the audience (because the picture is actually coming off the screen).

The application for patent of petitioners' device was held to be obvious under 35 U.S.C. Section 103. The Patent and Trademark Office claimed that to a person of ordinary skill in "the art", it would be obvious to combine the teachings of McCormick, Akin, and Bau to produce petitioners' device. This position was upheld by the Court of Customs and Patent Appeals.

REASONS FOR GRANTING THE WRIT

This petition raises substantial and important questions concerning the interpretation of 35 U.S.C. Section 103, which prescribes the threshold of creativity required for grant of letters patent. The issues involved are of great importance to all those involved in technological progress. Unlike typical patent cases which require understanding of highly technical matters, the instant case is concerned with interpretation of the law, an area for which this Court is most highly suited. This Court has specifically addressed these issues in Graham v. John Deere Co., 383 U.S. 1(1966), U.S. v. Adams, 383 U.S. 39 (1966), Eibel Co. v. Paper Co., 261 U.S. 45 (1922), Krementz v. The S. Cottle Co., 148 U.S. 556 (1892), Potts v. Creager, 155 U.S.

597 (1894), but these decisions have been ignored and contrary holdings have been reached in the proceedings in the Patent and Trademark Office and the United States Court of Customs and Patent Appeals (hereinafter "C.C.P.A."). The consequences of this case are far reaching as the C.C.P.A. has hurled a stone which can potentially trigger a judicial avalance. In the past the Court has repeatedly stressed that the restriction of the standards for patentability is the province of the legislature and not that of the Patent and Trademark Office. Petitioners respectfully request the Court consider this petition to prevent such a violation of these policies enunciated by this Court.

I.

THE PATENT AND TRADEMARK OFFICE (IN EFFECT) HAS RESTRICTED THE ABILITY TO OBTAIN PROTECTION UNDER THE UNITED STATES PATENT LAWS BY ITS DISREGARD OF PRIOR COURT HOLDINGS WHICH NARROWLY INTERPRET THE TERM "PRIOR ART", AS USED IN 35 U.S.C. SECTION 103, BY DECLARING THAT THE BROAD CATAGORY OF "OPTICAL DISPLAY DEVICES" IS A "PRIOR ART" WITHIN THE MEANING OF THAT STATUTE.

Petitioners have been denied patent protection due to refusal by the Patent and Trademark Office to apply the standards enunciated by this Court for interpretation of 35 U.S.C. Section 103. This section as enacted in 1952 requires that the subject matter of a patent not be an "obvious" improvement over already existing subject matter. The determination of obviousness is a question of law, although it does require the Court to weigh factual considerations. Graham

v. John Deere Co., 383 U.S. 17(1966) (hereinafter "Graham"). Graham held:

> Under Section 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

THE "ART"

The proper implementation of the above scheme hinges on the proper interpretation of the term "art", yet 35 U.S.C. in its entirety contains no definition. In Graham, this Court held that Section 103 "was not intended by Congress to change the general level of patentable invention", but was meant "...merely as a codification of judicial precedents...". Therefore, the definition of "the art" in cases both preceeding and following enactment of Section

103 provide guidelines for determining the normal scope which the term "art" should be given when evaluating the "obviousness" of a particular invention.

It is petitioners' contention that by incorrectly defining "art" and grossly overstating the scope and content of the prior art involved, the Patent and Trademark Office and the Court of Customs and Patent Appeals have committed an error of considerable magnitude. The Court's consideration of this issue is therefore of great importance in light of this country's ever increasing rate of technological advancement and resulting patent litigation.

Case law can be found by the volumes in which the Court defines the applicable "art" in very specific terms, such as:

The art of door knob manufacture, Hotchkiss v. Greenwood, 11 U.S.(1850) (hereinafter "Hotchkiss").

The art of chemical generation of electricity by batteries, U.S. v. Adams, 383 U.S. 45 (1966) (hereinafter "Adams").

The art of wire fencing, The Barb Wire Patent, 143 U.S. 281(1891) (hereinafter "Barb Wire").

The art of artificial incubation of eggs, Smith v. Smith v. Snow, 294 U.S. 5(1934) (hereinafter "Smith").

The art of plow design, the art of closure devices for liquid and semi-liquid containers, Graham v. John Deere Co., 383 U.S. 1, 22, 35.

The art of manufacture of hollow sheet-metal articles, Krementz v. S. Cottle Co., 148 U.S. 556, 559.

(See Appendix C attached hereto for additional cases supporting narrow interpretation of the term.)

Time and money make it impossible to review every case on this matter.

Nevertheless, it can be stated with certainty that the overwhelming body of case law for the past century reveals an extremely specific definition of the "art". Although it is irrefutable that "...the ambit of applicable art in given fields of science has widened by disciplines unheard of a half century ago" (Graham, at 19), definitions of the "applicable art" have always been consistent with the realities of our educational and economic systems. That is to say that one could find a group of people who practiced or studied a particular art. In order for Section 103 to have vitality it must remain consistent with the real world.

In the real world, individuals are not given general job assignments such as: improve the welfare of mankind, or increase the body of knowledge in the

field of physics. Instead, they are hired to design a new tomato slicer, or reduce emissions from a diesel turbine, or increase the lifespan of a storage battery. It can indeed be said that the trend today is decidedly towards specialization in the field of one's occupation, as a necessary result of technological expansion.

Therefore, when an individual ventures out of his art into the morass of other arts which surround him, and he successfully sifts them to find the solution to a problem in his own art, his work is not held to be "obvious" under Section 103, Potts v. Creager, 155 U.S. 597 (1895) (hereinafter "Potts").

> As we also said in Winslow, 'Section 103 requires us to presume full knowledge by the inventor of the prior art in the field of his endeavor.' (Application of Antle 444 F.2d 1168 (1971).)

ANALOGOUS ART

In some cases the Patent and Trademark Office and the Courts have held patent applicants responsible for knowledge in "analogous" or "pertinent arts". Usually these other arts have been extremely similiar to the art involved.

In the case of Graham this Court defined the scope of analogous or pertinent art to be:

> the art to which one can reasonably be expected to look for a solution of the problem which the patented device attempts to solve.

Under this line of reasoning we find cases in which the courts have taken a likewise narrow and specific view of "analogous art", In re Warner, 379 F.2d 1011 (1967); Baker Manufacturing v. Whitewater Manufacturing, 298 F. Supp. 1389, April 1969; In re Adams, 364 F.2d

473 (1966).

The position originally taken by the Patent and Trademark Office was that the art involved in this case was the art of motion picture and audio-visual apparatus. When petitioners demonstrated that individuals in this field had no knowledge of laser technology the Patent and Trademark Office expanded the art by characterizing it as the art of "optical display devices." This expansion of the art is unjustified as petitioners' claims are extremely narrow, referring only to motion pictures. This vague characterization of a particular subject matter is by no means an "art" in the legal sense. Were we to postulate the existence of an optical display mechanic or engineer, we would have an individual with ordinary skill and knowledge in microscopy, skywriting, television, air-

craft instrumentation, stadium scoreboards, data processing, motion pictures, fireworks, etc. The fact that such individuals do not exist is fairly common knowledge, yet the Patent and Trademark Office has taken a position to the contrary.

Remembering that Section 103 only requires creating a hypothetical man in the art and not a hypothetical art, the proper boundaries of an "art" should bear a semblence to the real world. In examining the real world of the motion picture arts we find people very strictly segregated regarding their skills and training. Each artist is found within his own niche, and lines are very rarely, if ever, crossed. For instance, there is no broad catagory of designers, rather there are costume designers or scenic designers; there are

no electricians, there are set electricians or lighting electricians. They each have different training, unions, and professional publications. It has been this way for decades and will no doubt continue for economic, historical, and practical reasons.

In trying to pinpoint the individuals' whose art might embrace petitioners' device we would look to lighting technicians, or special effects technicians, or motion picture projectionists. Among these three arts, petitioners know of no one who has used lasers or scanners or any system remotely related to petitioners'. The Patent and Trademark Office has provided no reference to the contrary, ignoring all requests for such. Furthermore, petitioners know of no publications in these areas which mention any comparable systems or

effects.

It appears that the Patent and Trademark Office has created an art to which the three prior unrelated patents could be included. As previously stated, this is indeed a great departure from the usual practice, and petitioners have gone to great lengths to comprehend the basis for adopting this position. Petitioners believe the error has its origin in the unintentional adoption of the following pattern of reasoning:

1. The introduction of technology into one art from a distant art is the work of an inventor and often worthy of patent protection. (See Potts, Smith, Application of Antle, 444 F.2d 1168 (1971).)
2. The introduction of technology into one art from an analogous art is the work of a mechanic or engineer and

not worthy of patent protection. (See Hotchkiss).

3. An analogous art is "the art to which one can reasonably be expected to look for the solution to the problem which the patented device attempts to solve". (See Graham).
4. An art which provides a reasonable solution to "the problem the device attempts to solve" is an analogous art.

This last step is erroneous and dangerous for it leads inevitably to continuous retroactive expansion of "the art" involved. This results in negation of the first premise, as all "distant arts" become "analogous arts" the moment they provide a reasonable solution to a problem in any other art. Such reasoning presents an extremely tempting trap where "the problem the device attempts

to solve" is complex and susceptible to numerous means of attack.

Petitioners' intention was to develop new special effects for motion pictures to provide a more dramatic viewing experience. The art to which they addressed themselves was quite specifically motion picture effects. Yet, petitioners' intentions were not perceived clearly in the preceedings below.

The primary examiner thought that petitioners intended to replace McCormick's incandescent lights with coherent (laser) light. The Board of Examiners believed that petitioners sought to automate laser light patterns. The solicitor thought they intended to update a rear projection film system. These misperceptions are by no means the product of inept or incapable minds; they merely typify reactions to disclosures of sig-

nificant advancements in technology.

In attempting to understand new and unexplored ground, the human mind makes comparisons to things that are familiar and well understood. Analogies of this type are beneficial in understanding how a new device works, but are not proper for determining if the requisite degree of inventiveness is present, for patent purposes. With each comparison to the old and familiar the mind perceives a corresponding reduction in the amount of creativity apparently needed to conceive of the device.

This retroactive expansion of "the art" denies the applicant a patent which results in stifled individual creativity and concomittent damage to our national economy.

II.

THE HOLDING, BY THE PATENT AND TRADEMARK OFFICE, THAT THE SUBJECT DEVICE IS "OBVIOUS", IGNORES THE JUDICIALLY CREATED (STANDARD) THAT IMPROVEMENTS WHICH SUBSTANTIALLY ADVANCE THE "PRIOR ART" ARE NOT OBVIOUS IF A HIGHER THAN ORDINARY LEVEL OF SKILL WAS NECESSARY FOR THEIR DEVELOPMENT.

The Patent and Trademark Office contends that the petitioners' device is an obvious updating of a prior (1918) patent held by McCormick. The petitioners believe they have shown their device to be a totally unrelated innovation.

However, assuming, arguendo, that we accept the Patent and Trademark Office's contention that the petitioners' device is an updating of McCormick, it is by no means an obvious one.

Although the line between the work of a mechanic and that of an inventor is often a fine one, this Court has provided criteria with which the

demarcation can be more clearly traced.

It can be shown that the Patent and Trademark Office has ignored established judicial criteria which are meant as guides in distinguishing between true invention and obvious improvement.

One of the key criteria upon which the Court has focused is the period of time between prior improvement in the art and the present claimed invention. With each moment that time passes, the likelihood that the new improvement is obvious diminishes. In Eibel Co. v. Paper Co., 261 U.S. 45, 68 (1923) (hereinafter "Eibel") it was held:

> The fact that in a decade of an eager quest for higher speeds this important chain of circumstances had escaped observation, the fact that when he made known his discovery, all adopted his remedy, leave no doubt in our minds that what he saw and did was not obvious and did involve discovery and invention.

The Court has also focused its attention on economic and motivational factors such as long felt need in the industry and favorable reactions in the commercial marketplace. The desire for new and varied special effects for motion pictures has not ceased since their inception. This innovative quest has brought us devices such as 3D pictures, Cinemascope, and Sensourround. There was never a specific demand for these devices as no one had ever imagined such effects could be achieved before their creation. Yet, inventors continue to experiment with new effects, secure in the knowledge that there will always be interest in new ways of enhancing motion pictures. It can be stated quite safely that the reason petitioners' device wasn't invented earlier was not a lack of interest in the indus-

try. Therefore, a factor weighing heavily in petitioners' favor is the long time span between McCormick's work in 1916, the invention of the laser in 1963, and petitioners' invention in 1976. In an industry in which competition for new effects is quite intense, it is hard to believe that the many engineers and mechanics in the field did not conceive of such an improvement.

Perhaps the only logical explanation is that petitioners' device is truly an invention and invention adheres to no time schedule no matter how intense the demand for it is.

> When for example a material has been available for many years, and no one has thought to use it in a new physical combination to answer a need equally old, there is as much reason for treating its selection of any other element;
>
> (Dewey and Almy Chemical Co. v. Mimex Co., Inc., 52 USPQ 138(1942) (hereinafter

"Dewey").)

The Courts have on occasion looked at success in the commercial marketplace as another factor to aid in determining whether a particular device is worthy of patent protection. Petitioners Factor and Zimmerman have deliberately kept their invention a secret. This decision was influenced by the very nature of the motion picture industry, which thrives on novel and unique changes. While the patent application was pending, it would have been quite possible for someone to produce a film using petitioners' invention. Therefore the measure of success in the commercial marketplace is not applicable.

Another criterion was established by this Court in Potts, Eibel (at 63), and in Barb Wire (at 283). In Potts, the Court recognized that substantial

improvement of an old device was invention. Mr. Potts improved upon a device that had been used for polishing wood by merely substituting materials in order to create a device to disintegrate clay. This substitution of materials to create a new device with a new use was invention.

A brief comparison of the devices in issue reveals enormous improvement and innovation on petitioners' part.

McCormick's device was limited to turning light bulbs on and off behind a screen when pictures of light bulbs or other sources of illumination were projected on the front of the screen. If movement of the light source was desired it could not be done in synchronization with the film. The light bulbs used were a single color and brightness. Installation of this device required modi-

fication of existing theater equipment and cumbersome installation procedures.

The petitioners' device projects laser images on the front of the screen in precise synchronization with each frame of the film. As the film images move or change perspective so does the laser portion of the scene. Laser effects can change brightness and color and are not limited to scenes where sources of illumination are depicted; it can depict any number and type of objects in the scene. The laser effects can also be projected (safely) out into or onto the audience to envelope the viewers in selected scenes. This results in actual three dimensional effects never before achieved in the history of motion pictures. Furthermore, petitioners' system can be installed with great ease and requires no modification of

existing motion picture theaters.

Comparing the two systems is like comparing a zoetrope to a modern color movie. It can accurately be said that they have common roots, but to deny that one is not a vast improvement over the other surpasses subjectivity and amounts to falsehood.

The application of any or all of this Court's criteria reveals that petitioners' device is the work of inventors. It is evident that in finding to the contrary the Patent and Trademark Office and the Court of Customs and Patent Appeals has ignored all judicial guidelines in this area.

III.

THE DECISION OF THE COURT OF CUSTOMS AND PATENT APPEALS IS ERRONEOUS AS IT IS TOTALLY UNSUPPORTED BY THE FACTS.

The decision of the Court of Customs and Patent Appeals is totally unsupported by the facts.

In the proceeding below the Court held:

> Akin and Bau et al. evidence that apparatus was available to construct means for automatically controlling and projecting laser beams to form coherent light patterns and that such existing apparatus is useful in creating various effects in theaters.

This statement is untrue, as Akin was never intended to be used theatrically and can not be used as such, but rather intended solely for use in the art of data processing. Furthermore, the viewer never views any laser light, let alone "patterns" in Akin's invention.

The C.C.P.A. also held:

> To apply modern-day, concedely (sic) known laser apparatus to McCormick would have been obvious to one skilled in the art of optical display systems, thus rendering the claimed subject matter obvious under 35 U.S.C. 103.

This statement is at best a half truth because the application of laser apparatus to McCormick's teaching would not produce a device even remotely resembling petitioners' device.

McCormick's device was commercially, industrially, and artistically a failure. After an exhaustive search, petitioners' find no recorded commercial use of McCormick's device at all. The effects which it produced detracted from, rather than enhanced, motion pictures because the simultaneous protection of light on the front and back of the screen results in washing out (or canceling) of each other. Furthermore,

the situations in which a light source was actually present in a scene were limited, and when they did occur, the presence of a light bulb shining behind the screen presented a rather very simplistic theatrical display.

Also of importance to note, is the overwhelming lack of versatility in McCormick's system. Modification of existing screens and projectors would have been required, and time consuming placement of electrical fixtures behind the screen was also necessary. These requirements posed serious detriments in an industry where standardization and ease of installation are quite often the key to success. These comments are not an attack upon the validity of McCormick's patent, but merely a summation of his teachings on rear screen effects.

Application of laser apparatus to

McCormick's teachings would produce roughly the same device as McCormick's, except it would have the ability to project much brighter light on the back of the screen and wash out more of the picture at considerably higher cost. This, no doubt, accounts for the complete lack of interest in such updating of McCormick's teaching.

> The invention of a combination is not anticipated by earlier and impracticable experiments, for the same end, with isolated elements of the combination. (Smith at 2, 17)

Petitioners' device in no way resembles McCormick's, because petitioners attempt to solve a totally different problem (Eibel at 67, Dewey at 138). While McCormick attempted to make film more realisitic, petitioners attempt to make film more futuristic. Their effects depict things which belong to the world of fantasy and science fiction. It is

for this reason that the direct viewing of laser light is a necessity. Whether it is projected on the front of the screen or at the audience, the viewer looks at laser light.

The laser produces light which is unfamiliar to the human eye , due to its unique brilliance, purity and concentration. Petitioners Factor and Zimmerman realized that this "special" light, which doesn't occur in nature, was ideal for special effects in movies. They then went about solving the problems of delivering these new special effects to the movie viewer. The problem wasn't applying lasers to McCormick; the problem was enabling the movie viewing audience to see laser special effects applied to film, live, in the theater itself; and McCormick is of no help in arrivng at a solution to this problem.

As admitted by petitioners, some laser effects had been used in other arts, but not motion pictures (solicitor's statements to the contrary are without any documentation). However, these effects are dissimiliar to petitioners', as effects for concerts and theaters are disorganized patterns of light (as in Bau) whereas petitioners effects are integral elements in the motion picture scenes themselves (requiring great detail and precision).

In trying to apply their effects to movies, petitioners initially photographed the laser effects. These attempts were unsuccessful as the properties of laser light were destroyed when photographed and then projected with conventional (incandescent) equipment. The Patent and Trademark Office attributed these experiments to the work

of <u>others</u> in the art. During the C.C.P.A. proceedings, the solicitor argued that Akin and Bau had disclosed such work. This argument is without merit, in that neither Akin or Bau make any reference to the use of motion pictures. Without the production of evidence to support this claim by the Patent and Trademark Office, the contention that petitioners' unsuccessful and unpublished experiments were known in the art is clearly erroneous.

Petitioners' initial failures caused them to conclude that the laser portion of the motion picture would have to be generated in the theater. This presented the new problem of storing the information which controlled the laser portion of the movie and synchronizing it with the film.

The synchronization element of this

system was addressed by the solicitor in the proceedings below, albeit incorrectly. The solicitor would have this Court read McCormick as embodying synchronous scanning of light. However, this reading is clearly spurious, for McCormick makes no claim to having devised a method whereby moving light would be synchronized. Rather, he refers specifically to achieving certain effects by the nonsynchronous movement of the light bulbs themselves. In contrast, petitioners' device involves the continuously synchronized scanning of the laser beam. The solicitor asserts that movement of McCormick's light bulbs is the functional equivalent of scanning and therefore petitioners' device is a mere "updating" of McCormick's teaching.

Clearly petitioners have accomplished what McCormick could not, for

the slow rotation of light bulbs is in no way equivalent functionally or otherwise to the high speed scanning of a laser beam. McCormick's effects required the actual physical movement of the hardware, i.e. the light bulbs. Petitioners' device is addressed to the scanning of the beam of light (at such high rates that the beam movement becomes imperceptable), not the actual movement of the laser instrument. Both the ultimate effect, and the manner of accomplishing the result are in no way similiar.

In effect petitioners realized the solution to their problem would require making two separate "movies" (one of conventional film images and one of laser images), neither of which would make sense without the other. Then they created a device to intertwine the two,

so as to work in unison. Such an idea was not, and still has not, ever been thought of outside of petitioners' minds. Yet, petitioners went further and designed and tested a system which made their dreams into reality. In an art where no one had worked with lasers, such a transformation is surely the work of inventors.

> It is, of course, urged, and naturally, that no more than a mechanic's skill was needed to take the final step. But a mechanic is one who applies his trade by rule or rote, and only uses what he learned yesterday to do the work of to-day in the same old manner. He may do it excellently, but if he has, not only hindsight, but insight or foresight, first to comprehend the problem and use even the learning of yesterday to do the new thing in a new way, that mechanic has usually earned the inventor's title.
>
> (A. Kimball Co. v. Noesting Pin Ticket Co. 262 Fed. 148 (CA 2 1919))

Petitioners realize that the Court

is loathe to overturn the decision of a lower court, particularly when such court has special expertise in a particular field. But the holding in this case is in such blatant conflict with the facts that no technical expertise is required to realize that this decision must be set aside.

CONCLUSION

An injustice has been done to petitioners, but injustices must sometimes be tolerated for the sake of preserving the law. Consideration of this petition is of great importance, as failure to do so will place the law in jeopardy, and that is intolerable. The protection of intellectual property was deemed of such great importance as to warrant inclusion in our Constitution (Article I, Section 8, Clause 8). At a time when natural resources and labor are less expensive in many other countries, there is even a greater need for its preservation and development. If the Patent and Trademark Office's position is allowed to stand as precedent it will erode the protection which the Congress has deemed proper to provide for inventors. If such protection is to be withdrawn, it should be by

decision of those who rightly granted it and not by the misinterpretations of an agency. The path the Court has decided to follow, as evidenced by volumes of case law is quite clear. The Court has taken consistent positions time and again in its decisions to either grant or deny patent protection. This Court cannot, nor do we suggest that it should, hear all parties who are aggrieved by agency action. However, when an egregious situation presents itself, it is encumbant upon this Court to review and rectify the action taken by the agency charged with administering the law.

Just as the public is now clamoring and creating movements to foster the American economy by waving banners and carrying slogans, such as "buy American cars", we are asking to aid in the

spirit of American invention. Prior Court holdings have indicated that preserving American creativity is of utmost importance. This theme echoes throughout each opinion. In the landmark case of Graham v. John Deere Co., the Court in discussing Jefferson's philosophy on the nature and purpose of the patent monopoly stated (at p. 9):

> The patent monopoly was not designed to secure to the inventor his natural right in his discoveries. Rather it was a reward, an inducement to bring forth new knowledge (emphasis applied).

Petitioners have heeded the advice of our forefathers and have worked steadily to create a device new and beneficial to the American economy. Their invention satisfies all criteria for patent protection set forth by this Court. It would indeed be unfortunate if a similiar device received recognition

not having its origin in our country, but rather as being the product of a foreign inventor.

We, as a nation, are presently competing fiercely with foreign nations in order to maintain our lead in progress in technology; we must not take steps which will hinder our advancement. In other countries, inventors are being encouraged to continue their work; creativity is actively supported. The denial of a patent can be used as a weapon, a weapon to stifle or kill all creative endeavors. We are asking this Court to continue to use patent protection as a shield, to shield against granting private monopolies to designs not worthy of protection, yet freely granting patent protection to devices, such as the instant device, which display the true qualities of invention.

Respectfully submitted,

EDWARD A. RUESTOW
Attorney for petitioners
36 Valley Road
Old Westbury, New York 11568
(516) 626-3565

APPENDIX A

OPINION AND DECISION OF BOARD OF APPEALS, NOVEMBER 20, 1979

Before Bennett and Spencer, Examiners-in-Chief, and Craig, Acting Examiner-in-Chief.

Bennett, Examiner-in-Chief.

This is an appeal from the final rejection of claims 24 through 37.

Claim 24 is reproduced below:

24. A system for the synchronous projection of film images and complementing coherent light patterns comprising:

means for projecting successive film images to a screen;

a coherent light source;

and means for projecting a coherent light beam from said source to form coherent light patterns to compliment said film images synchronously with said film images including:

beam scanning means for scanning said beam over the area desired for said coherent light patterns;

an information storage

device for storing information corresponding to the visual content of said coherent light patterns;

and means responsive to said information storage device for controlling said beam to form said coherent light patterns.

The references relied on are:

McCormick	1,256,147	Feb. 12, 1918
Akin	3,181,170	April 27, 1965
Bau et al. (Bau)	3,757,106	Sept. 4, 1973

In addition to the above citation of prior art by the examiner, appellants acknowledge that they were not the first to complement film images with enhancing light; brief, page 2. Nor were they the first to use laser light to generate optical theatrical displays and visual patterns; description, page 3.

All claims stand rejected under 35 USC 103. As evidence of obvi-

ousness, the examiner cites the well-known practice of utilizing a laser for generating visual and lighting effects; and in addition, the examiner cites McCormick, Akin and Bau as additional evidence in support of his rejection. We refer to the examiner's answer for a statement of his position.

OPINION

We sustain the rejection. The essence of the invention is that the laser beams are controlled by a storage device. In other words, appellants are attempting to obtain a patent on the concept of automatic as contrasted with the manual control of a laser display. Nothing in claim 24 requires that the laser display be projected on the screen itself. All that the claim requires is

that the laser beams are projected and "compliment" the film images - whatever that means. In short, where the practice was to manually control the beams (if that was the practice) appellants now control the beams automatically. As a general rule, it is obvious to do automatically things that were formally done manually. Furthermore, the concept of automation and projecting light on the screen is suggested by McCormick. Although appellants have not contended otherwise, Akin and Bau confirm that hardware was available from which to construct a means for automatically controlling the beam to form coherent light patterns. The broad concept of doing so would have been obvious to a worker in the art.

The known advantages of using laser light, as described by appellants

on page 2 of their brief, is a further reason why the invention would have been obvious. Appellants do not assert that they were the first to recognize the advantageous properties of lasers. The contrary was true. The desirable properties of laser light as described by appellants were known to workers in the art. Therefore, the results of using lasers to make light patterns as claimed would have been expected rather than unexpected. Expected beneficial results are evidence of obviousness. In re Skoner, 186 USPQ 80 (CCPA 1975).

Although appellants mention in their brief that the dependent claims recite further details of their device, no argument urges that these details render the invention unobvious over and above parent claim 24. Therefore all of the claims stand or fall together.

Accordingly, the decision of the examiner is affirmed. AFFIRMED

s/ R.D. Bennett
Examiner-in-Chief

s/ Richard Spencer
Examiner-in-Chief

s/ Terry D. (illegible)
Examiner-in-Chief
(Acting)

BOARD OF APPEALS

APPENDIX B

UNITED STATES COURT OF

CUSTOMS AND PATENT APPEALS

IN RE NEAL FACTOR)
and NAT ZIMMERMAN) Appeal No. 80-541.
)
) Serial No. 708,206.

Decided: October 2, 1980

Before MARKEY, Chief Judge, and
RICH, BALDWIN, MILLER
AND NIES, Associate Judges.

BALDWIN, Judge.

DECISION

The decision of the United States Patent and Trademark Office Board of Appeals affirming the rejection of claims 24-37 under 35 USC 103 is affirmed.

OPINION

Appellants admit that they are not the first to complement film images with enhancing light, that light generated from lasers has been used in theatrical and concert lighting, and that their system utilizes already existing components. McCormick teaches the synchronous projection of actual light patterns in cooperation with the projection of film images to enhance visual effects for motion pictures. Akin and Bau et al. evidence that apparatus was available to construct means for automatically controlling and projecting laser beams to form coherent light patterns and that such existing apparatus is useful in creating various effects in theaters.

To apply modern-day, concedely (sic) known laser apparatus to McCormick

would have been obvious to one skilled in the art of optical display systems, thus rendering the claimed subject matter obvious under 35 USC 103.

APPENDIX C

Definitions of "The Art" in the following cases:

Dann v. Johnston
425 U.S. 219 (1976)
The art of data processing systems used for financial record keeping.

True Temper Corp. v. C.F. & I. Steel Corp.
601 F.2d 495 (1979)
The art is manufacturing systems of railway anchors.

Application of Gyurik and Kingsbury
596 F.2d 1012 (1979)
"The art of record . . . describes the specific benzimidazoles in issue."

Cathodic Protection Service v. American Smelting & Refining Co.
594 F.2d 499 (1979)
The art is the field of cathodic protection.

Republic Industries Inc. v. Schlage Lock Co.
592 F.2d 963(1979)
The art of door closing; the art of valve and fluid handling.

Application of Herschler
591 F.2d 693(1979)
The art is one of the class of steroids (involved in tissue penetration).

Centsable Products Inc. v. J.H. Lemelson
591 F.2d 400(1979)
The art comprised velcro and an earlier game using a "cocklebur missle...thrown

to fibrous hairy surface".

Application of Swan, Wood, et al.
582 F.2d 638(1979)
The art is chemical compounds
"...possessing antimicrobial activity...
(involving) derivatives of pteridine and
pharmaceutically acceptable salts.

Solder Removal Co. v.
U.S. International Trade Commission
582 F.2d 628(1978)
"...the solder and flux art".

Application of Goodwin, et al.
576 F.2d 375(1978)
The art of molds used in glass
manufacture.

General Electric Co. v. United States
572 F.2d 342(1977)
The art of position control devices.

Systematic Tool, etc. v.
Walter Kidde & Co., Inc.
555 F.2d 342(1977)
The art of design of food
slicing devices.

Aluminum Co. of America v.
Amerola Products Co.
552 F.2d 1020(1977)
The art of making baseball bats.

Lerner v. Child Guidance Products Inc.
552 F.2d 1020 (1977)
The art of keyboard instruments capable
of making sounds of other instruments for
purposes of toy design (eg. toy piano
sounds like carillon, xylophone, etc.)

Universal Athletic Sales Co. v.
American Gym, Recreational & Athletic
Equipment Corp.
546 F.2d 530 (1976)
The art of design of body-training
devices.

Application of Lamberti
545 F.2d 747 (1976)
The art of hydroxyaryl sulfonium halide
compounds.

Tanks, Inc. v. Reiter Industries, Inc.
545 F.2d 1276 (1976)
The art of aerating and cleaning milk
tanker trucks.

ITT v. Raychem Corp.
538 F.2d 453 (1976)
The art of production of electrical
insulators.

Ortho Pharmaceutical Corp. v.
Am Hospital Supply
534 F.2d 89 (1976)
The art of blood coagulent testing agents

CMI Corp. v. Metropolitan Enterprises,
Inc.
534 F.2d 874 (1976)
The art of granular material loading
equipment.

Forbro Design v. Raytheon Co.
532 F.2d 758 (1976)
The art of regulated power supplies.

Saf-Gard Products, Inc. v.
Service Parts Inc.
532 F.2d 1266 (1976)
The art of internal combustion engine
cooling systems.

Application of Kuhle
526 F.2d 553 (1975)
The art of conductivity-measuring devices.

Shanklin Corp. v. Springfield Mount Co.
521 F.2d 609 (1975)
The art of "in-line" packaging machines.

Tracor Inc. v. Hewlett-Packard Co.
519 F.2d 1288 (1975)
The art of electron-capture devices.

Application of Buehler
515 F.2d 1134 (1975)
The art of melting and pouring titanium and high titanium alloys.

Deere and Co. v. Sperry Rand Corp.
513 F.2d 1131 (1975)
The art of mower-conditioners (in hay harvesting).

Jacobson Bros. Inc. v. United States
512 F.2d 1065 (1975)
The art of underwater television.

Charvat v. Commissioner of Patents
503 F.2d 138 (1974)
The art of production of grinding wheels.

Research Corp. v. Nasco Industries, Inc.
501 F.2d 358 (1974)
The art of ". . . changes in hair pigmentation (of animals) following freezing."

Application of Meng
492 F.2d 843 (1974)
The art of dairy food packaging, specifically, slices of cheese.

Cool-Fin Electrical Corp. v.
International Electric Research Corp.
491 F.2d 660 (1974)
The art of electron tube shields.

In re Ryan
480 F.2d 1388 (1973)
The art of regenerating ion exchange resins.

Application of Roberts
470 F.2d 1399 (1973)
The art of making rolls of PET (polyethylene Terephthalate) film.

Die Craft Metal Products, Inc.
461 F.2d 5 (1972)
The art of the design of auto accessories.

Flour City Architectural Met. v.
Alpana Aluminum Products, Inc.
454 F.2d 98 (1972)
The art of "thermal break" (window) frames.

Application of Kamm
452 F.2d 1052 (1972)
The art of the inhibition of polymerization on molecular sieves.

Tapco Products Co. v.
Van Mark Products Corp.
446 F.2d 420 (1971)
The art of brakes for bending and folding sheet metal.

Westwood Chemical Inc. v.
Owens-Corning Fiberglass Corp.
445 F.2d 911 (1971)
The art of the treatment of glass fibers.

Application of Antle
444 F.2d 1168 (1971)
The art of equipment for commercial farming.

In re Facer
442 F.2d 976 (1971)
The art of masonite sheeting; the art of aluminum sheeting.

Uarco Inc. v. Moore Business Forms, Inc.
440 F.2d 580 (1971)
The art of "continuous business forms."

Burgess Cellulose Co. v.
Wood Flong Corp.
431 F.2d 505 (1970)
The art of paper making; the art of stereotype mat making.

Waldon, Inc. v. Alexander
Manufacturing Co.
423 F.2d 91 (1970)
The art of earthmoving bulldozer-type equipment.

Indiana General Corp. v. Krystinel Corp.
421 F.2d 1023 (1970)
The art of soft ferrite compounds with high frequency communications applications.

Deep Welding Inc. v. Sciaky Bros., Inc.
417 F.2d 1227 (1969)
The art of deep welding.

Continental Can Co. v.
Crown Cork and Seal Co.
415 F.2d 601 (1969)
The art of molding and curing plastisol.

Ellicott Machine Corp. v.
United States and American M. & M. Co.
405 F.2d (1969)
The art of hydraulic-type dredges; the art of bucket-type dredges (for removing soil, etc. from riverbeds).

Grinnell Corp. v. Virginia Electric & Power Co.
401 F.2d 451 (1968)
The art of servomotors; the art of high temperature piping systems.

Kaiser Industries v. McLouth Steel Corp.
400 F.2d 36 (1968)
The art of refining, oxidizing and removing impurities from molten pig iron.

Erwin-Newman Co. v. United States
393 F.2d 819 (1968)
The art of ". . . structures utilizing a suspended cantilever member."

Gass v. Montgomery Ward & Co.
387 F.2d 129 (1967)
The art of construction and design of automobile accessories, specifically bumper guards.

Leach v. Badger Northland, Inc.
385 F.2d 193 (1967)
The art of the design of silos for silage (corn, grain, etc.)

U.S. Gypsum Co. v. Dale Industries Inc.
383 F.2d 497 (1967)
The art of interior wall construction.

In re Warner
379 F.2d 1011 (1967)
The art of crayon making was held analogous to the art of cosmetic pencil manu-

facture.

Application of Grout
377 F.2d 1019 (1967)
The art of beekeeping.

Application of Uhlig
376 F.2d 320 (1967)
The art of producing printing plates by electrophotographic techniques.

Hensley Equipment Co. v. Esco Corp.
375 F.2d 432 (1967)
The art of design of heavy construction equipment.

Application of Baum
374 F.2d 1004 (1967)
The art of ferro-metallurgical processes.

Application of Cochran
374 F.2d 1017 (1967)
The art of design of weeders.

Sisko v. Southern Resin & Fiberglass Corp.
373 F.2d 866 (1967)
The art of construction of laminated boat hulls.

Application of Martin
372 F.2d 556 (1976)
The art of humidifier construction and design.

In re Winslow
365 F.2d 1017 (1966)
The art of bag opening equipment.

Up-Right, Inc. v. Safway Products, Inc.
364 F.2d 580 (1966)
The art of scaffolding

In re Adams
364 F.2d 473 (1966)
The court held the art of paper coating distinct and separate from the art of electrophotography.

Skirow v. Roberts Colonial House, Inc.
361 F.2d 388 (1966)
The art of design and construction of containers for storage of cups.

King-Seeley Thermos Co. v.
Refrigerated Dispensers, Inc.
354 F.2d 533 (1965)
The art of Ice-making machines.

Marston v. J.C. Penney Co.
353 F.2d 976 (1965)
The art of construction of flexible buoyant materials (rubbers, foam rubber, etc.).

Application of Legator
352 F.2d 377 (1965)
the art of using chemicals (bactericides) in controlling microorganisms in paper mill waters.

Application of Ford
352 F.2d 381 (1965)
Cellulosic materials in the insulation art.

Application of Altmann
352 F.2d 389 (1965)
The art of removing coating on coated paper.

Application of Long
347 F.2d 651 (1965)
The art of design of two-compartment containers.

Application of Fay
347 F.2d 597 (1965)
The art of gasoline compounding.

In re Lettvin
339 F.2d 249 (1964)
The art of analgesic treatment of female disorders involving pain in the vaginal area.

In re Rossetto
292 F.2d 300 (1961)
The art of photocomposing machines.

Reiner v. Leon Co.
285 F.2d 501 (1960)
The art of the manufacture of hair curlers.

O.M.I. Corp. v. Kelsh Instrument Co.
279 F.2d 579 (1960)
The art of stereoscopic map making.

In re Roth
275 F.2d 743 (1960)
The art of crypt building.

Glatt v. Murphy Co.
270 F.2d 137 (1959)
The art of fabric coating.

In re Irmscher
262 F.2d 85 (1958)
The art of tea bag manufacturing equipment.

Mojonnier Dawson Co. v. U.S. Dairies Sales Corp.
251 F.2d 345 (1958)
The art of filling containers in dairy industry and aerosol industry.

Baker Manufacturing v. Whitewater Manufacturing
298 F. Supp 1389(1969)
The art of pitless adapters for water wells.

APPENDIX D

The Constitution of The United States

Article I, Section 8, Clause 8:

The Congress shall have power

To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries;

35 U.S.C. 103:

Conditions for patentability; non-obvious subject matter. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvi-

ous at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.